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Reconstruction performance with ACTS and the Open Data Detector

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Over the last years, the ACTS software has matured in functionality and performance while at the same time the Open Data Detector (ODD), a revision and evolution of the TrackML detector, has been established. Together they form a foundation for algorithmic research and performance evaluation also for detectors with time measurements, like the ODD. In this contribution we present the performance for reference physics samples as a baseline for a reconstruction chain implemented with ACTS for silicon based detectors. This serves as a validation for both the ODD geometry and the ACTS reconstruction algorithms. At the same time it is a reference for experiments looking into ACTS reconstruction performance. Additionally, we use it to validate the ACTS intrinsic fast track simulation (ActsFatras) and present a coherent continuous integration testing suite to monitor performance changes over time.

Authors: SALZBURGER, Andreas (CERN); STEFL, Andreas (Technische Universitaet Wien (AT)); CALACE, Noemi (CERN); BUTTI, Pierfrancesco (SLAC National Accelerator Laboratory (US))

Presenter: STEFL, Andreas (Technische Universitaet Wien (AT))

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